

13. OCCURRENCE OF WHITE SUCKERFISH *REMORINA ALBESCENS* ON THE SOUTH-EAST COAST OF INDIA

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Zoological Survey of India, Marine Biological Station, Chennai is maintaining a marine aquarium which is stocked with ornamental fishes brought by local fishermen from the Chennai Coast. During the first week of March 2006, a live White Sucker fish was brought which had not been collected earlier. It was alive for 25 days in the aquarium. After close observation, it was identified as *Remorina albescens*. This species was collected 15 km off the village Nochikuppam, Chennai (13° 06' N; 80° 18' E). *Remorina albescens* is generally called White Suckerfish because of its white colour. Perusal of literature shows that this species has not been reported from the East Coast of Peninsular India. Previously this species was caught at Thalayi, 50 miles north of Calicut (now Kozhikode) in the west coast of India by the Madras Fisheries Department. This is the first report of the species from the East Coast of India. The specimen has been included in the registered collections of the Marine Biological Station.

Material examined: 1 ex., 214 mm, SL F. 5226 ZSI/MBS, Nochikuppam, Chennai, 06.iii.06.

[Class: Actinopterygii; Order: Perciformes; Suborder: Percoidei; Family: Echeneidae; Species: *Remorina albescens* (Temminck & Schlegel 1850); (Fig.1)]

Echeneis albescens Temminck & Schlegel, Fauna Japonica Pisces. Part 6, 1850, p. 272.



Fig. 1: *Remorina albescens* (Temminck & Schlegel 1850)
a. Ventral view; b. Dorsal view; c. Lateral view

Echeneis albescens Day, Fishes of India, Part II, 1876, p. 258.

Remorina albescens Maul, Bol. Mus. Municipal. Funchal. IX, Art 23, 1956, p.66.

Description: D1. 3; D2. 21; A. 20; P. 19; V. 1/5; C. 15

Head: Head is rather long and flattened, its length 3.57, width 4.12, depth 8.23 in standard length (SL); head width 1.10, Head depth 2.19, Snout length 2.28, inter orbital width 1.16, width of sucker 1.16, length of sucker 0.79, sucker laminae 4.38 times in head length (HL).

Body: It is wide anteriorly with depth 9.30, width 4.76 in SL, pre-dorsal distance 1.38, pre pelvic distance 2.93, pre anal distance 1.34, caudal peduncle length 23.78 times in SL.

Colour: Body is white and pectoral fin pale grey to white. *Remora* has no swim bladder and uses the sucking disc on the top of its head to obtain rides from other animals such as large sharks, and sea turtles. The sucking disk, developed from a transformed spinous dorsal fin, contains 16-20 transverse movable lamina which create a partial vacuum permitting the *Remora* to obtain rides on the larger animals (Nelson 1984). The lower jaw projects past the upper jaw and the teeth, located in jaws and vomer are in a villiform patch, are pointed and recurved slightly inward. The morphological characters of *Remorina albescens* are given in Table 1.

The *Remorina* is a pelagic marine fish that is usually found in the warmer parts of most oceans clinging on to large sharks, sea turtles, bony fishes and marine mammals (Marshall 1965). Based on observations of the species in captivity (Bohlke and Chaplin 1993), *Remora remora* requires a swift passage of water over the gills and cannot survive in stagnant waters. The *Remorina* is not considered to be a parasite, despite it being attached to the host. Instead they are considered to have a commensal relationship with their host, since they do not hurt the host and just cling for the ride (McClane 1998). It has also been suggested (McClane 1998) that the relationship is symbiotic since the *Remorina* can obtain its food acting as a cleaner fish and removing parasites from the host, thus benefitting both. It is not known whether the Sharks tolerate the *Remorina*'s presence or are just unable to catch them, but no *Remorina* has ever been found in a

Table 1: Morphological characters of *Remorina albescens*

Characters	Measurements (mm)
Total length	240
Standard length	214
Head length	57
Snout length	25
Inter-orbital width	49
Body depth	23
Sucker width	49
Sucker length	72
Sucker laminae	13
Predorsal distance	155
Caudal peduncle length	9.0
Body width	45
Head width	52
Head depth	26
Pre pelvic distance	72
Pre anal distance	160

Shark's stomach (McClane 1998). Instead, some small specimens have been found in the inside of sharks mouth, clinging to the roof (McClane 1998).

Discussion: Day (1889) reported its occurrence in the seas of India, but no specimen has so far been reported from the East Coast. Kapoor *et al.* (2002) listed this species in fish biodiversity of India but he did not mention the exact location. Munro (2000) also reported this species in the coastal waters of Sri Lanka. Rajan (2003) studied the marine food fishes of Andaman and Nicobar Islands, but he did not record this species. Based on the study of the various morphometric and meristic characters this species was confirmed as *Remorina albescens* and based on the available literature it is observed that this species has not been reported from the East coast of India.

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REFERENCES

- BOHLKE, J & C. CHAPLIN (1993): Fishes of the Bahamas and adjacent tropical waters. Wynewood, PA: First University of Texas Press. 771 pp.
- DAY, F. (1889): Fishes. The Fauna of British India including Ceylon and Burma. Fishes 2: Today & Tomorrow Printers and Publishers. New Delhi. 509 pp.
- KAPOOR, D., R. DAYAL & A.G PONNIAH (2002): Fish biodiversity of India. National Bureau of Fish Genetic Resources Lucknow, India. 775 pp.
- MARSHALL, T. (1965): Fishes of the Great Barrier Reef and Coastal waters of Queensland. Sydney, Australia: Livingston publishing Co. 566 pp.
- MCCLANE, J. (1998): McClanes New Standard Fishing Encyclopedia and International Fishing Guide. New York, NY: Gramercy Books. 1156 pp.
- MUNRO, I.S.R. (2000): The marine and fresh water fishes of Ceylon, Narendra Publishing House, Delhi. 349 pp.
- NELSON, J.S. (1984): Fishes of the World. A wiley-interscience publication. New York. 523 pp
- RAJAN, P.T. (2003): A field guide to marine food fishes of Andaman and Nicobar Islands, 1-260. Zoological Survey of India, Calcutta. 260 pp.

14. SEXUAL DIMORPHISM IN 'SPOTTED SCAT' – *SCATOPHAGUS ARGUS* (LINNAEUS)

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Introduction

Sexual dimorphism is widespread in nature and can be influenced by sex-specific natural selection resulting from ecological differences between sexes (Reimchen and Nosil 2004) and it is an important component of the morphological variations in biological populations. Differences in the selective pressures experienced by the sexes can ultimately result in the evolution of sexual dimorphism of morphological traits (Andersson 1994).

Such studies are of great significance in taxonomy,

bionomics, reproductive biology, unisex culture of fishes, hybridization experiments, hormonal sex control, identification of maturity stage, identification of hybrids, breeding season, induced breeding, seedling production technology and also in the observation of courtship and mating, mate selection and preference.

The study on sexual dimorphism has been carried out only in a very few species of fishes like *Puntius filamentosus* (Thobias 1974), *Tetraodon travancoricus* Hora & Nair (Inasu 1993), *Ompok bimaculatus* and *Horabagrus brachysoma*